

IN THE CLAIMS

Please amend the claims as follows:

1-9. (Canceled)

10. (New) A system for providing a regulated voltage to supply a load, said system comprising:

a source for providing a substantially constant current approximately corresponding to the maximum current likely to be drawn by the load; and

a regulation device receiving, on an input terminal, the constant current and providing, on an output terminal, the regulated load supply voltage, at least one capacitor being coupled to the output terminal;

said regulation device including;

a first circuit comprising a hysteresis comparator receiving the load supply voltage and a reference voltage, and

a second circuit comprising at least one semiconductor device having one main terminal coupled to said input terminal and a control terminal coupled and controlled from the output of said hysteresis comparator so that said at least one semiconductor device is biased in the substantially linear portion of its current-voltage characteristic.

11. (New) The system of claim 10, wherein said at least one semiconductor device comprises a first MOS transistor.

12. (New) The system of claim 10, wherein the regulation device includes a Schottky diode connecting the input terminal to the output terminal.

13. (New) The system of claim 11, wherein the regulation device includes a second MOS transistor, a source of which is connected to the input terminal and a drain of which is connected to the output terminal, the second transistor being controlled, from the hysteresis comparator, by a circuit introducing a delay at the turning-on of the second transistor.

14. (New) The system of claim 13, wherein the constant current source is formed of a current-controlled switched-mode power supply, a third MOS transistor, connected between the ground and a first terminal of an inductance, a second terminal of which provides the constant current, wherein the third MOS transistor is controlled in the linear portion of its current-voltage characteristic

15. (New) The system of claim 10, wherein the constant current source is formed by a linear current regulator.

16. (New) The system of claim 10, wherein the capacitor is a ceramic capacitor.

17. (New) A device for limiting transient variations of a voltage provided by the system of claim 10 from a power converter forming the current source, including:

a first MOS power transistor connected between the input terminal and the ground;
a one-way conduction element connected between the input terminal and the output terminal; and

means for detecting the regulated voltage and for controlling the first transistor in the linear portion of its current-voltage characteristic.

18. (New) The device of claim 17, wherein the one-way conduction component is formed of a second MOS transistor, a source of which is connected to the input terminal and a drain of which is connected to the output terminal.

19. (New) A system for providing a regulated voltage to supply a load, said system comprising:

a source for providing a substantially constant current approximately corresponding to the maximum current likely to be drawn by the load; and

a regulation device receiving, on an input terminal, the constant current and providing, on an output terminal, the regulated load supply voltage, at least one capacitor being coupled to the output terminal;

said regulation device including;

a comparator receiving the load supply voltage and a reference voltage,
a first semiconductor element having one main terminal coupled to the input terminal and a control terminal coupled and controlled from the output of said comparator so that said first semiconductor element is biased in the substantially linear portion of its current-voltage characteristic, and

a second semiconductor device connected between the input terminal and the output terminal and being controlled from the comparator by a circuit introducing a delay at the turning on of the second semiconductor element.

20. (New) The device of claim 19, wherein said comparator is a hysteresis comparator.

21. (New) The device of claim 19, further including a third semiconductor element connected to a first terminal of an inductance, a second terminal of which provides the constant current, wherein the third semiconductor element is controlled in a linear portion of its current-voltage characteristic.

22. (New) The device of claim 19; The system of claim 1, wherein the constant current source is formed by a linear current regulator.

23. (New) The system of claim 10, wherein the capacitor is a ceramic capacitor.

24. (New) A system for providing a regulated voltage to supply a load, said system comprising:

a source for providing a substantially constant current approximately corresponding to the maximum current likely to be drawn by the load; and

a regulation device receiving, on an input terminal, the constant current and providing, on an output terminal, the regulated load supply voltage, at least one capacitor being coupled to the output terminal;

said regulation device including;

a hysteresis comparator receiving the load supply voltage and a reference voltage,

a first semiconductor device having one main terminal coupled to said input terminal and a control terminal coupled and controlled from the output of said hysteresis comparator so that said first semiconductor device is biased in substantially linear portion of its current-voltage characteristic,

and a second semiconductor device coupled between the input terminal and the output terminal.

25. (New) The system of claim 24, wherein said second semiconductor device comprises a Schottky diode.

26. (New) The system of claim 25, wherein said hysteresis comparator comprises an operational amplifier for receiving the load supply voltage and a reference voltage.

27. (New) The system of claim 26, wherein said hysteresis comparator further includes a pair of MOS transistors connected in series and controlled from said operational amplifier.

28. (New) The system of claim 27, wherein the common connection between said pair of said MOS transistors controls the control terminal of said first semiconductor device.